

microphone, audio speaker and small battery source, which is capable of fitting into the user's ear. The wireless earset unit may be used for hands free applications. The user may then walk around while communicating with the handset or earset. If one is using the earset he/she may also use a pen input means **7** or keyboard **16** while in audio communications. For semi-private voice communications, some users may prefer using the handset **14**, with hand set speaker **14A**, handset key pad **14B** and handset microphone pickup **14C**

[0045] If one is using the handset or earset, the base computer unit **100** may be placed some distance away from the user, typically in the same room or nearby room. The base computer unit may be designed for a higher transmitting power level. The base unit may be designed to allow the user to switch between a high or low level transmitting and receiving power levels. The earset **34** or handset **14** can be designed for a much lower RF transmit and receiver electrical power levels, because the base computer unit **100** can be place a relatively short distance away (typically from a few feet to about fifty feet). Thus, the base unit **100** may relay RF communications between the handset or earset and an external wide area communications network. The base unit could safely embody a more powerful RF transmitter resulting in a larger signal to noise ratio. This will result in improved wireless communication to and from wide area networks that may have antennas several miles away. A very important advantage of this invention is that the user has the option of having very low electrical power electromagnetic fields near his/her's head, thus improving the health and safety aspects for the user. Since less power is required for the handset **14**, it can be thinner and smaller then a standard cellular handset. Thus the handset can be smaller and easier to place in the user's pocket. The earset can be made vary small so that the users can leave it in his/her's ear for long periods of time and have one's hands free for other uses.

[0046] FIG. 3(b) shows the base unit computer-display unit **100** in a closed configuration, in which one may carry it under one's arm. Since the unit is typically battery powered and contains electronics for a wireless voice and PCS like operations, one could use it for voice/data communications while carrying it about (i.e., in transport). The user may speak towards one or more microphones **36** located along the top edge. The user will be able to hear the other person(s) talking, through audio speakers **30** located conveniently on the base unit. A small telephone keypad could be located behind a protective door **41**, for convenient dialing of a telephone number. The door may be a simple sliding door device or mechanism. The antenna **32** may be a sliding telescoping type. A simple display indicator **22** may show the electrical charge state of the battery source. A plurality of switches and indicators **46** may be located along one edge of the base unit for easy viewing and access. Such switches and indicators may include: an On-Off switch, Mode Switch (for voice, data, and video modes, etc.), high/low power transmit switch, ring/alarm mode and/or speaker/mic mode (for earset, handset, etc.). For securing the two halves of the base unit, a flap **43** made of a simple expanding material, which may include a snap means at one end and may be secured with a pin and/or pivot means. The flap would then snap to secure the flat panel display assembly **2** and cover assembly (**9**, **16**, **8**). In FIG. 3(a), the flap **43** is shown rotated in the opposite orientation for clarity only. Other securing means may be embodied that are know to those in the art.

[0047] FIG. 4(a) shows the portable computer system or computer-display unit **100** covered with a thin soft protective material or film, such as leather or vinyl. This material will protect the unit when it is bumped and/or banged into hard objects while in the use in field or office environments. The protective material may have a texture or roughen surface (as indicated in the figure), which would also provide for a relatively high mechanical friction; so it will be easier to carry under one's arm. Holes or cutouts may be embodied in the protective cover for viewing and/or using the various indicators, switches and keypads. A zipper securing means **45** may be embodied with the notebook, as shown in FIG. 4(a). The zipper means may be attached to the leather or vinyl covers so that the unit can be zipped closed to secure and protect objects placed inside the notebook. A pull tab **45A** of the zipper means is shown in the figure. This embodiment would be especially applicable in rugged or harsh environments. A strap **50** may be attached to the unit so that the user may temporarily store it on a hook for example. FIG. 4(b) shows an embodiment of the battery power source section **9**. As in previous embodiments, it may be detached from the notebook computer-display unit. A spring loaded pull out power cord **9B** may be embodied, so that the user can conveniently pull out the power cord to electrically charge the package. The power cord and plug may be easily retracted inside a cutout space on the side of the subassembly. Several adjunct attachments and/or accessories may be carried in small compartments in the notebook unit. In addition, accessories and attachments may be carried in a separate briefcase or like carrying case (not shown in the figures). Such accessories may include a line power supply and cord, extra battery power source section **9**, spare earsets **34**, spare handsets **14**, external hard drive, external CD ROM drive, external mouse, spare styluses and/or spare video camera/lenses **46**.

[0048] An important advantage of this notebook computer unit invention is that it can be operational when it is in the closed configuration. Thus, while carrying the unit in one's hand or under one's arm, the user can perform voice, data and/or video communications. The notebook unit can be used in an open configuration on a desktop, airline tray or wide variety of other computing environments. The unit can be configured for wire based or wireless communication operations. The unit can be used for general purpose computing, network computing, pen input computing, PCS/Cellular, data/video conferencing, on-line network computing and data collaboration applications. The notebook unit can be used as a personal organizer or personal information manager, such as a computer equivalent of the Franklin Planner™ or equivalent planners. A multiplicity of personal computing applications may be embodied on its computer. The unit may be capable of wire or wireless communications, linking it to multiple handsets and earsets. The notebook computer unit may have a plurality of electrical connectors along the edges or other convenient locations for connection to a plurality of external devices, including but not limited to: modems, network interface cards, hard disks, floppy disks, and bus extender enclosures.

[0049] Preferably the notebook assemblies should be made relatively thin and light weight that would be an advantage in mobile use. For example, the flat panel display assembly **2** should have a thickness of roughly 0.75 inch or less. The cover assembly may be comprised of the battery power source section **9**, keyboard assembly **16**, and external